6/15/81

MEMORANDUM TO: Western International Corporation File

FROM: L. Carl Broadhead, Air Quality Specialist CLB

SUBJECT: Silver Maple Mine (NOI 6/5/81)

I. Background:

The Silver Maple mine is an old tailings pile of Park City which, with modern technology, is now profitable to reprocess. The procedure will be to doze the old tailings into a pile (2800 ton max); A loader will transfer the ore tailings at a rate of 50 ton/hr to a hopper feeding screen and roll crusher, which will then feed the spiral concentrators. The metals will be separated out and the refuse will be returned to the pit area. The first year 2.27 surface acres will be processes, 2nd year 5.68 acres, and the 3rd year the final 4.31 surface acres. They are negotiating with Park City officials to reprocess several acres of tailings the city owns adjacent to the to the Silver Maple. Silver Creek will have to be temporarily relocated as it flows down the middle of the project. Ground moisture is very high.

II. Emission Summary & Modeling

Particulate	3.97 T/yr
CO	81.21 "
NO_x	12.09 "
SO_2	0.88 "
HC	4.70 "

TSP modeling showed no violation of secondary NAAQS.

III. BACT Review

The company has proposed water sprays to augment the high natural moisture content of the area. The Creek presently creates marshy areas where cattails grow. The creek will temperarily be diverted and if the natural moisture drops

sufficiently that dusts are emitted; water spraying will be done in the dozing area, on the stockpile, the shaker screen, crusher, and conveyor drop points as necessary.

This is considered BACT for this application.

IV. Recommendations and Conditions:

Approval is recommended. BACT is satisfied considering the high moisture content of this marshy creek bed. Recommended conditions are:

1. Visible emissions from any source shall not exceed 20% opacity.
2. Water spraying shall be accomplished on the dozer area, stock pile, shaker screen, crusher, and conveyor drop points to minimize fugitive dusts and emissions as dry conditions warrant or as determined necessary by the Executive Secretary. A record/log shall be kept to include dates the water spraying is done, amounts and areas of application. This record/log shall be made available to the Executive Secretary upon request.

WESTERN INTERNATIONAL CORPORATION
399 South 700 East, Suite 16
Salt Lake City, Utah 84105
Telephone: (801) 487-7522

June 5, 1981

Mr. Monte Keller
Bureau of Air Quality
150 West North Temple
Salt Lake City, UT 84103

Dear Monte:

Per our discussion of yesterday, enclosed is a diagram of our operations and following is a brief description.

Our projections are to process 50 tons of tailings per hour or approximately 320 cubic yards per day. The D8 Cat will work about two days per week dozing the tailings into a stockpile and regrading and contouring the refuse. There can be dust problems here. The water table is high and much of the ground is wet or under water. We will sprinkle as needed to control dust. The stockpile will have a maximum of 650 cubic yards at any time.

The front end loader will work each day loading the tailings into the shaker screen hopper. Again, dust will be controlled as needed by sprinkling. The oversized materials from the shaker screen go through a small roll crusher with sprinkling to control dust.

Once the product enters the spiral concentrators, there will be no dust problems. The concentrators use 200 gallons of water per minute which is recaptured and reused. The concentrators separate the concentrate and refuse with the concentrate being loaded on a flatbed truck in 55 gallon drums for transportation to the refining facilities. The refuse goes to a hopper for loading on a dump truck to haul back to its original site for regrading and contouring.

We are making every effort to comply with all regulations and to keep the citizens of Park City appeased as much as possible. We feel we have as clean an operation as possible under the circumstances and feel our operation will have very little impact on the air quality.

We appreciate very much your efforts in our behalf and will appreciate all haste in getting the publicity started so we won't be delayed beyond July 10. Thanks much.

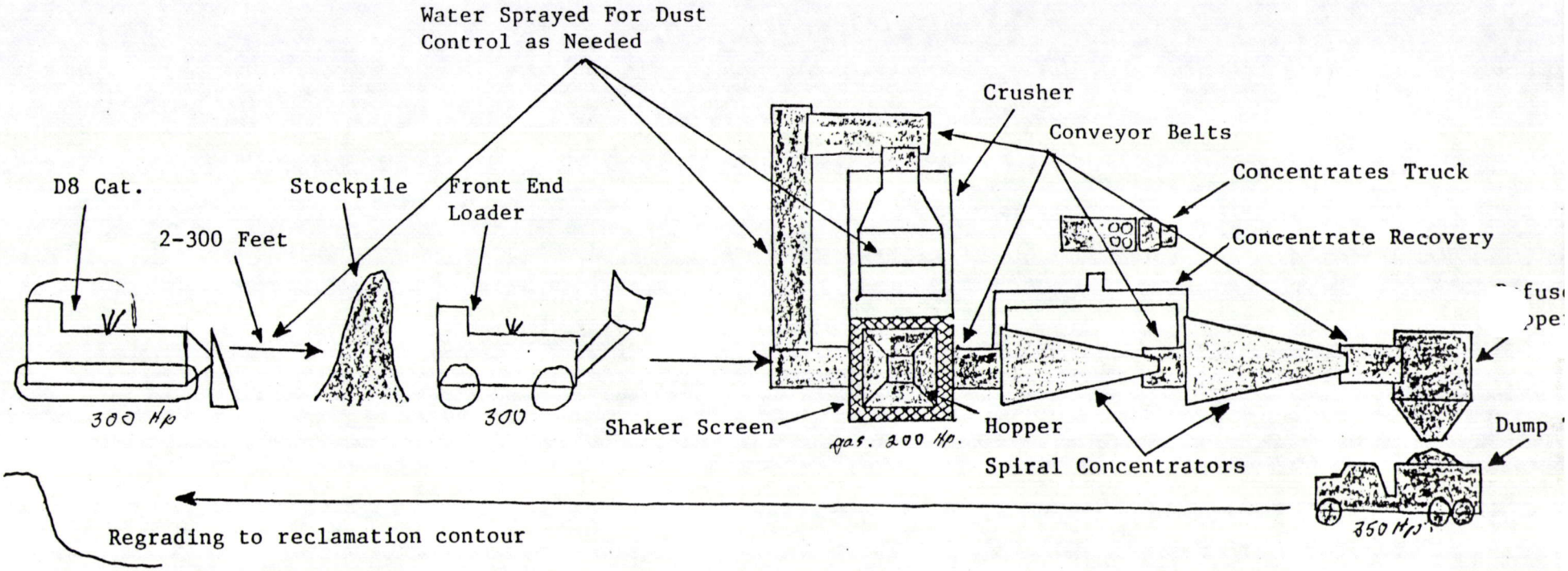
Best regards,

LaVar Engle

LE/sm
Enclosure

LaVar Engle
Area Director

SILVER MAPLE MINE OPERATIONS



The Cat will work about 2 days per week dozing tailings into a stockpile and regrading and contouring. The Front End Loader will feed materials into shaker screen hopper with oversized materials going into the crusher. The tailings are processed through two 25 foot spiral concentrators with the concentrates recovered and loaded for transport to th refining facilities and the refuse goes to the loading hopper for transporting to fill the excavated area prior to regrading to the reclamation contour as specified by the BLM.

Each Spiral Concentrator uses 200 gallons of water per minute so there is no chance of any dust from that point .. regrading and contouring. The water is captured and recycled so the maximum water loss will be about 40 gallons per minute or less.

MODELING RESULTS SUMMARY

Name: Silver Maple Mine

Location: Summit Co.

Modeling Results:

Date Received _____

Date Completed 6/11/81

Annual Average Concentrations ($\mu g/m^3$)

	TSP	Allowable	SO_2	Allowable
Incremental Addition	3	—		
Total Increment Used	—	—		
Expected Observed Conc.	34	60		

Maximum 24 Hour Concentrations ($\mu g/m^3$)

	TSP	Allowable	SO_2	Allowable
Incremental Addition	6	—		
Expected Observed Conc.	82	150		

Modeling Methodology:

Annual SL City Star

24 Hour F Stability @ 2.5 m/s

Background Mills } ann = 31 ug/m^3

178 } 24hr = $31(2.01)^{1.28} = 76$ ug/m^3

Comments: _____